



SEQUENCE LISTING

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<110> Roberts, James A
Kelly, Beth L.

<120> METHODS FOR INCREASING PLANT CELL PROLIFERATION BY
FUNCTIONALLY INHIBITING A PLANT CYCLIN INHIBITOR GENE

<130> 14538A-45-1

<140>

<141>

<150> 60/134,373

<151> 1999-05-14

<160> 22

<170> PatentIn Ver. 2.1

<210> 1

<211> 408

<212> DNA

<213> Arabidopsis thaliana

<400> 1

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ttcaagaaac aagttcctca acacaacaac atcaacacaa gtataactct cgatcaaaca 120
tctacatcta ctattgtctc tacatgttct tcttcatcaa cgactttgtc ttctcctcta 180
gacacaatct actctgttcc ctctccatcc ccagcagcgg tgctgacgtc accaggcgg 240
tgttgtaccc cgaaagccaa gaagtctagg ataccggaga tgctgacgtg tccaccggcg 300
ccgaagaagc aaaggggtctc gaaaaactgt gtgttacgac ggagacagat cgttttcttt 360
gctccgccgg agatagagct cttcttcgtc aacgcacacg atcgatga 408
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<210> 2

<211> 135

<212> PRT

<213> Arabidopsis thaliana

<400> 2

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Met Ala Ser Lys Lys Ala Arg Lys Pro Asn Arg Ala Glu Lys Lys Leu
  1           5           10           15
```

```
Thr Arg Ser Cys Phe Lys Lys Gln Val Pro Gln His Asn Asn Ile Asn
      20           25           30
```

```
Thr Ser Ile Thr Leu Asp Gln Thr Ser Thr Ser Thr Ile Val Ser Thr
```

35

40

45

Cys Ser Ser Ser Ser Thr Thr Leu Ser Ser Pro Leu Asp Thr Ile Tyr
 50 55 60

Ser Val Pro Ser Pro Ser Pro Ala Ala Val Leu Thr Ser Pro Gly Gly
 65 70 75 80

Cys Cys Thr Pro Lys Ala Lys Lys Ser Arg Ile Pro Glu Met Leu Thr
 85 90 95

Cys Pro Pro Ala Pro Lys Lys Gln Arg Val Ser Lys Asn Cys Val Leu
 100 105 110

Arg Arg Arg Gln Ile Val Phe Phe Ala Pro Pro Glu Ile Glu Leu Phe
 115 120 125

Phe Val Asn Ala His Asp Arg
 130 135

<210> 3

<211> 639

<212> DNA

<213> Arabidopsis thaliana

<400> 3

ctcgagattt accaaaaaag tttcccaaaa aaacaaaaac atacacaagt ttagatatgg 60
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 ccaaaacctc aaaaacaaag aaggacgaag gtgatgacga cgaagatgac ctccgctgca 180
 gcacacccac atcccaagaa cacaagattc ccgccgtcgt agactctcca cctcctccgc 240
 cgagaaaacc ccggccacca ccgtcagcac cgtcggctac ggccggctctg atgatcagat 300
 cgtgcaagag gaagctttta gtgtcgactt gtgagataat catgaatcgg gaagagattg 360
 accgtttctt ctctccgctc tacaatgaga cgtcgactac ggctaaacgg cggagaagtt 420
 acccttattg ttctogaaga tgaggcttaa ttcaatattt acattttttt acagttttac 480
 tggaaatatt gtgaaattaa ttatctgttg gtgttcgggt ttaaataattt ttaatttaat 540
 tatgaatatg gatggataat tttctgcaac cgcgcattat aatttcgcat ggaggggtcg 600
 atgttgtaaa ttgagtaata aatgaaggta aatctcgag 639

<210> 4

<211> 213

<212> PRT

<213> Arabidopsis thaliana

<400> 4

Pro Arg Asp Leu Pro Lys Lys Phe Pro Lys Lys Thr Lys Thr Tyr Thr
 1 5 10 15

Ser Leu Asp Met Asp Leu Glu Leu Leu Gln Asp Leu Ser Lys Phe Asn
 20 25 30

Phe Pro Thr Pro Ile Lys Ile Arg Ser Lys Thr Ser Lys Thr Lys Lys
 35 40 45

Asp Glu Gly Asp Asp Asp Glu Asp Asp Leu Arg Cys Ser Thr Pro Thr
 50 55 60

Ser Gln Glu His Lys Ile Pro Ala Val Val Asp Ser Pro Pro Pro Pro
 65 70 75 80

Pro Arg Lys Pro Arg Pro Pro Pro Ser Ala Pro Ser Ala Thr Ala Ala
 85 90 95

Leu Met Ile Arg Ser Cys Lys Arg Lys Leu Leu Val Ser Thr Cys Glu
 100 105 110

Ile Ile Met Asn Arg Glu Glu Ile Asp Arg Phe Phe Ser Ser Val Tyr
 115 120 125

Asn Glu Thr Ser Thr Thr Ala Lys Arg Arg Arg Ser Tyr Pro Tyr Cys
 130 135 140

Ser Arg Arg Xaa Gly Leu Ile Gln Tyr Leu His Phe Phe Thr Val Leu
 145 150 155 160

Leu Glu Ile Leu Xaa Asn Xaa Leu Ser Val Gly Val Arg Phe Xaa Ile
 165 170 175

Phe Leu Ile Glx Leu Xaa Ile Trp Met Asp Asn Phe Leu Gln Pro Arg
 180 185 190

Ile Leu Ile Ser His Gly Gly Val Asp Val Val Asn Xaa Val Ile Asn
 195 200 205

Glu Gly Lys Ser Arg
 210

<210> 5

<211> 809

<212> DNA

<213> Arabidopsis thaliana

<400> 5

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gtgttggtat agtacgacgg cgagattctc ctccggttga agaacagtgt caaatcgaag 240
aagaagattc gtcggtttcg tgttgttcta catcggaaga gaaatcgaaa cggagaatcg 300
aatttgtaga tcttgaggaa aataacggtg acgatcgtga aacagaaacg tcgtggattt 360
acgatgattt gaataagagt gaggaatcga tgaacatgga ttcttcttcg gtggctgttg 420
aagatgtaga gtctcgccgc aggttaagga agagtctcca tgagacggtg aaggaagctg 480
agttagaaga ctttttttcag gtggcgaggaga aagatcttcg gaataagttg ttggaatgtt 540
ctatgaagta taacttcgat ttcgagaaaag atgagccact tgggtggagga agatacgagt 600
gggttaaatt gaatccatga agaagacgat gatgataatg atgatcattg ttttcaccaa 660
agtacttatt atttctcttc tgtaataatc tttgctttga tttttctttt aacaaaaatcc 720
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aaaaaaaaaa aaaaaaggta aatctcgag                                     809

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<210> 6

<211> 203

<212> PRT

<213> Arabidopsis thaliana

<400> 6

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Pro Arg Asp Val Val Glu Glu Asn Gly Val Thr Thr Thr Thr Val Lys
  1              5              10              15

```

```

Arg Arg Lys Met Glu Glu Glu Val Asp Leu Val Glu Ser Arg Ile Ile
      20              25              30

```

```

Leu Ser Pro Cys Val Gln Ala Thr Asn Arg Gly Gly Ile Val Ala Arg
    35              40              45

```

```

Asn Ser Ala Gly Ala Ser Glu Thr Ser Val Val Ile Val Arg Arg Arg
    50              55              60

```

```

Asp Ser Pro Pro Val Glu Glu Gln Cys Gln Ile Glu Glu Glu Asp Ser
    65              70              75              80

```

```

Ser Val Ser Cys Cys Ser Thr Ser Glu Glu Lys Ser Lys Arg Arg Ile
      85              90              95

```

```

Glu Phe Val Asp Leu Glu Glu Asn Asn Gly Asp Asp Arg Glu Thr Glu
    100              105              110

```

```

Thr Ser Trp Ile Tyr Asp Asp Leu Asn Lys Ser Glu Glu Ser Met Asn
    115              120              125

```

```

Met Asp Ser Ser Ser Val Ala Val Glu Asp Val Glu Ser Arg Arg Arg
    130              135              140

```

Leu Arg Lys Ser Leu His Glu Thr Val Lys Glu Ala Glu Leu Glu Asp
145 150 155 160

Phe Phe Gln Val Ala Glu Lys Asp Leu Arg Asn Lys Leu Leu Glu Cys
165 170 175

Ser Met Lys Tyr Asn Phe Asp Phe Glu Lys Asp Glu Pro Leu Gly Gly
180 185 190

Gly Arg Tyr Glu Trp Val Lys Leu Asn Pro Xaa
195 200

<210> 7

<211> 626

<212> DNA

<213> Arabidopsis thaliana

<400> 7

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ctgattcatc accggactct catgacgtca tcgtcttcgc gggttcatct tcttccgttg 180
cttcgtcggc ggcttttagcg tctgatgaat gttccgttac catcgggtga gaagaaagtg 240
atcagtcctc gagtatcagc tccggttggt tcaccagtga atcgaaagaa atcgcgaaaga 300
acagttcgtc gtttggtgta gatctggagg atcatcaaat cgaaaccgaa accgaaacct 360
caacattcat caccagcaat ttcagaaaag agacgagtc agtgagtga gggttgagg 420
aaacgacaac agaaatggaa tcatcatcgg caacgaagag aaaacaaccg ggggtgagga 480
agactccaac ggcggcggag attgaggatt tggtctcgga gctagagagt ccagacgata 540
agaagaagca attcatagaa aagtacaact tcgatattgt caatgacgaa ccgcttgaag 600
gtcgctacaa gtgggatcga ctttaa 626
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<210> 8

<211> 209

<212> PRT

<213> Arabidopsis thaliana

<400> 8

Pro Arg Asp Leu Pro Lys Asn Pro Arg Glu Lys Lys Met Ser Glu Arg
1 5 10 15

Lys Arg Glu Leu Ala Glu Glu Ala Ser Ser Thr Ser Phe Ser Pro Leu
20 25 30

Lys Lys Thr Lys Leu Asn Asp Ser Ser Asp Ser Ser Pro Asp Ser His
35 40 45

Asp Val Ile Val Phe Ala Val Ser Ser Ser Ser Val Ala Ser Ser Ala

50

55

60

Ala Leu Ala Ser Asp Glu Cys Ser Val Thr Ile Gly Gly Glu Glu Ser
65 70 75 80

Asp Gln Ser Ser Ser Ile Ser Ser Gly Cys Phe Thr Ser Glu Ser Lys
85 90 95

Glu Ile Ala Lys Asn Ser Ser Ser Phe Gly Val Asp Leu Glu Asp His
100 105 110

Gln Ile Glu Thr Glu Thr Glu Thr Ser Thr Phe Ile Thr Ser Asn Phe
115 120 125

Arg Lys Glu Thr Ser Pro Val Ser Glu Gly Leu Gly Glu Thr Thr Thr
130 135 140

Glu Met Glu Ser Ser Ser Ala Thr Lys Arg Lys Gln Pro Gly Val Arg
145 150 155 160

Lys Thr Pro Thr Ala Ala Glu Ile Glu Asp Leu Phe Ser Glu Leu Glu
165 170 175

Ser Pro Asp Asp Lys Lys Lys Gln Phe Ile Glu Lys Tyr Asn Phe Asp
180 185 190

Ile Val Asn Asp Glu Pro Leu Glu Gly Arg Tyr Lys Trp Asp Arg Leu
195 200 205

Xaa

<210> 9

<211> 6

<212> PRT

<213> Arabidopsis thaliana

<400> 9

Glu Xaa Xaa Xaa Xaa Phe

1

5

<210> 10

<211> 23

<212> PRT

<213> Arabidopsis thaliana

<400> 10

Lys Tyr Asn Phe Asp Xaa Xaa Xaa Xaa Xaa Pro Leu Xaa Xaa Gly Arg
1 5 10 15

Tyr Xaa Trp Xaa Xaa Leu Xaa
20

<210> 11

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR primer

<400> 11

ggtacccgat ttcgagaagg agaagc

26

<210> 12

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR primer

<400> 12

gatatcgaca cgacttttct gggctc

26

<210> 13

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR primer

<400> 13

gatatcctac ggagccggag aattg

25

<210> 14

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR primer

<400> 14

actagtttgt ttctcagctt ccacaaaa

28

<210> 15

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR primer

<400> 15

ggtacccgat ttcgagaagg agaagc

26

<210> 16

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR primer

<400> 16

actagtgaca cgacttttct gggctc

26

<210> 17

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR primer

<400> 17

ggtacccgac aacagaaatg gaatcatc

28

<210> 18

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR primer

<400> 18

gtcgacaaaag tcgatccac ttgtagc

27

<210> 19

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR primer

<400> 19

gtcgacaaaag cgagagcttg cagaag

26

<210> 20

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR primer

<400> 20

actagtcggt ttcgatttga tgatcc

26

<210> 21

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR primer

<400> 21

actagtaaag tcgatccac ttgtagc

27.

<210> 22

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR primer

<400> 22

gagctccgac aacagaaatg gaatcatc

28